

REMARKS

By this amendment, Applicant cancels claims 1-20 without prejudice or disclaimer of the subject matter thereof and amends claim 23. Accordingly, claims 21-24 are now pending in this application.

In the Final Office Action¹, the Examiner took the following actions:

objected to the drawings;

rejected claim 23 under 35 U.S.C. § 112, first paragraph;

rejected claims 1-5, 7-20, and 23 under 35 U.S.C. § 102(e) as being anticipated by JP 2001-296891 to Nogi Kazuyuki (hereinafter "Nogi");

rejected claims 6 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Nogi in view of Chang et al. (U.S. Patent No. 6,469,732) (hereinafter "Chang"); and

rejected claims 21 and 22 under 35 U.S.C. § 103(a) as being unpatentable over Nogi in view of Higaki et al. (U.S. Patent No. 6,804,396) (hereinafter "Higaki").

I. Objection to the Drawings

Applicant respectfully traverses the objection to the drawings. In objecting to the drawings, the Final Office Action alleges that "the directivity detector repeats the detection of the input sound multiple times, supplies the voice recognition unit with the output of the microphone array obtained by the directivity set by the directivity setting unit, and conducts the subsequent detection of the direction of the input sound,"

¹ The Final Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicant declines to automatically subscribe to any statement or characterization in the Final Office Action.

(emphasis omitted) as recited in claim 23, is not shown in the drawings. Applicant disagrees.

Applicant submits that Figure 6, for example, shows an embodiment of claim 23 and, in particular, depicts directional detector 201, which corresponds to the claimed “directivity detector.”² Furthermore, Applicant submits that claim 23 is an apparatus claim, and Figure 6 depicts the structural elements of the claimed “directional setting apparatus.” The M.P.E.P. indicates that “[a]ny structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing” (emphasis added). M.P.E.P. § 608.02(d). Because the structural details of claim 23 are sufficiently depicted in the drawings, Applicant submits that the drawings meet the relevant drawing requirements and show the elements of the claims such that one could have a proper understanding of the invention. Applicant therefore requests the Examiner’s reconsideration and withdrawal of the objection to the drawings.

II. Rejection of Claim 23 under § 112, ¶1

Applicant respectfully traverses the rejection of claim 23 under 35 U.S.C. § 112, first paragraph. The Final Office Action alleges that the specification does not provide a written description of “the directivity detector repeats the detection of the input sound multiple times, supplies the voice recognition unit with the output of the microphone array obtained by the directivity set by the directivity setting unit, and conducts the

² In making the various references to the specification and drawings set forth herein, it is to be understood that Applicant is in no way intending to limit the scope of the claims to the exemplary embodiments shown in the drawings and described in the specification. Rather, Applicant expressly affirms that it is entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation and applicable case law.

subsequent detection of the direction of the input sound.” Applicant has amended claim 23 for further clarity. Furthermore, support for the amended language is found in Applicant’s specification at, for example, page 19, line 30, to page 20, line 4. Accordingly, Applicant requests that the Examiner reconsider and withdraw of the rejection of claim 23 under 35 U.S.C. § 112, first paragraph.

III. Rejection of Claims 1-5, 7-20, and 23 under § 102(e)

Applicant respectfully traverses the rejection of claims 1-5, 7-20, and 23 under 35 U.S.C. § 102(e) as being anticipated by Nogi. In view of the cancellation of claims 1-5 and 7-20, the rejection regarding these claims is now moot. Furthermore, Nogi does not anticipate independent claim 23 for at least the following reasons.

To properly anticipate Applicant’s claim, the Examiner must demonstrate the presence of each and every element of the claim in issue, either expressly described or under principles of inherency, in a single prior art reference. Furthermore, “[t]he identical invention must be shown in as complete detail as is contained in the . . . claim.” See M.P.E.P. § 2131, quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Finally, “[t]he elements must be arranged as required by the claim.” M.P.E.P. § 2131. In this application, the rejection is improper because the Examiner has not demonstrated the presence of each and every element of Applicant’s claim.

Independent claim 23, as amended, recites a directional setting apparatus including, among other things, a “directivity detector [that] **repeats the detection of the input sound multiple times**, supplies the voice recognition unit with the output of the

microphone array having the directivity set by the directivity setting unit **based on a first detection result** of the direction of the input sound, and **conducts the subsequent detection** of the direction of the input sound by **using a sound other than the certain keyword**" (emphases added). That is, as recited in independent claim 23, a first detection of a direction of an input sound is performed by detecting a certain keyword and a directivity is set based on the first detection result. Furthermore, a second detection of a direction of the input sound is performed by detecting a sound other than the certain keyword.

In contrast, Nogi discloses performing voice recognition and setting directivity based only on a keyword. For example, Nogi discloses that "[k]eyword input signals from a voice input section 1 are stored in a voice buffer section 2." Abstract. Next, "[a] directivity adjusting section 3 changes the directivity of the signals and a voice recognition section 5 conducts recognition processes for the signals." Id. Then "[a] degree of agreement discrimination section 45 discriminates a directivity having high degree of agreement among the recognition results." Id. However, Nogi neither discloses nor suggests that detection of an input sound is repeated using different sounds. That is, Nogi does not disclose or suggest at least a "directivity detector [that] **repeats the detection of the input sound multiple times**, supplies the voice recognition unit with the output of the microphone array having the directivity set by the directivity setting unit **based on a first detection result** of the direction of the input sound, and **conducts the subsequent detection** of the direction of the input sound by **using a sound other than the certain keyword**," as recited in amended independent claim 23 (emphases added).

For at least the above reasons, Nogi does not teach each and every element of claim 23 and, accordingly, the reference does not anticipate the claim. Therefore, the Examiner should withdraw the rejection of claim 23 under 35 U.S.C. § 102(e).

IV. Rejection of Claims 6 and 24 under § 103(a)

Applicant respectfully traverses the rejection of claims 6 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Nogi in view of Chang. The rejection regarding cancelled claim 6 is now moot. Furthermore, no *prima facie* case of obvious has been established for dependent claim 24 for at least the following reasons.

"The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. . . . [R]ejections on obviousness cannot be sustained with mere conclusory statements." M.P.E.P. § 2142, 8th Ed., Rev. 7 (July 2008) (internal citation and inner quotation omitted). "[T]he framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). . . . The factual inquiries . . . [include determining the scope and content of the prior art and] . . . [a]scertaining the differences between the claimed invention and the prior art." M.P.E.P. § 2141(II). In rejecting a claim, "Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art." M.P.E.P. § 2141(III).

As discussed above, Nogi does not disclose or suggest at least a "directivity detector [that] repeats the detection of the input sound multiple times, supplies the voice recognition unit with the output of the microphone array having the directivity set by the

directivity setting unit based on a first detection result of the direction of the input sound, and conducts the subsequent detection of the direction of the input sound by using a sound other than the certain keyword," as recited in amended independent claim 23.

The Final Office Action alleges that Chang discloses elements of dependent claim 24. Final Office Action at page 11. Even if the Examiner's allegations are correct, which Applicant does not concede, Chang also does not teach or suggest at least a "directivity detector [that] repeats the detection of the input sound multiple times, supplies the voice recognition unit with the output of the microphone array having the directivity set by the directivity setting unit based on a first detection result of the direction of the input sound, and conducts the subsequent detection of the direction of the input sound by using a sound other than the certain keyword," as recited in amended independent claim 23, from which claim 24 depends.

In view of the above, the Final Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and claim 24. Accordingly, no reason has been clearly articulated as to why the claim would have been obvious to one of ordinary skill in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established and the Examiner should withdraw the rejection of claim 24 under 35 U.S.C. § 103(a).

V. Rejection of Claims 6 and 24 under § 103(a)

Applicant respectfully traverses the rejection of claims 21 and 22 under 35 U.S.C. § 103(a) as being unpatentable over Nogi in view of Higaki. No *prima facie* case of obvious has been established for claims 21 and 22 for at least the following reasons.

Independent claim 21 recites a directional setting apparatus including, among other things, “a voice recognition unit configured to detect a certain keyword included in a sound signal based on the input sound and set a directional determination period based on an occurrence time of a sound signal corresponding to the certain keyword,” “a directivity detector configured to detect a direction of the input sound in the directional determination period,” and “a directivity setting unit configured to set a directivity of a prescribed apparatus based on the detected result of the directivity detector, wherein the voice recognition unit recognizes a keyword for releasing the directivity set by the directivity setting unit and outputs a directivity release signal; and the directivity setting unit releases the directivity of the prescribed apparatus when the directivity release signal is supplied from the voice recognition unit.” That is, as recited in independent claim 21, when a certain keyword is detected, a directional determination period is set, a direction of an input sound is detected in the directional determination period, and a directivity is set based on the detected result. Furthermore, when the directional determination period ends, it is possible to change the directivity so that, for example, it is possible to recognize the voices of multiple persons at different locations. To accomplish this, before the directional determination period is ended, it is possible to release the directivity by a directivity release signal.

The Final Office Action admits that Nogi does not teach or suggest that “the voice recognition unit recognizes a keyword for releasing the directivity set by the directivity setting unit and outputs a directivity release signal; and the directivity setting unit releases the directivity of the prescribed apparatus when the directivity release signal is supplied from the voice recognition unit.” See Final Office Action at page 12. However,

the Final Office Action alleges that Higaki compensates for the deficiencies of Nogi.

This is incorrect for at least the following reasons.

Higaki discloses that if a “voice includes one of predetermined keywords (103) . . . a gesture recognition process is initiated” (emphasis added). Higaki, col. 6, lines 23-25. However, Higaki does not teach or suggest that a “voice recognition unit **recognizes a keyword for releasing** the directivity set by the directivity setting unit and outputs a directivity release signal” and a “directivity setting unit **releases** the directivity of the prescribed apparatus when the directivity release signal is supplied from the voice recognition unit,” as recited in independent claim 21 (emphases added).

Figures 5 to 7 of Higaki each include a step 115, which is labeled, “Finish?” Furthermore, each of Figures 5 to 7, step 115 is preceded by a step 113, which is labeled, “Recognize Gesture.” Regarding these steps, Higaki discloses that, “[b]ased on the relative position of the hand, a gesture performed by the moving subject is determined (113). If the movement of the moving subject is terminated, the gesture recognition process ends.” Higaki, col. 6, lines 32-35. That is, Higaki discloses determining whether or not a person is moving. However, Higaki does not disclose or suggest recognizing a keyword for releasing a set directivity and outputting a directivity release signal based on the recognized keyword to release the directivity of an apparatus. Accordingly, Higaki does not teach or suggest a “voice recognition unit **recognizes a keyword for releasing** the directivity set by the directivity setting unit and outputs a directivity release signal” and a “directivity setting unit **releases** the directivity of the prescribed apparatus when the directivity release signal is supplied from the voice recognition unit,” as recited in independent claim 21 (emphases added).

In view of the above, the Final Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and independent claim 21. Accordingly, no reason has been clearly articulated as to why the claim would have been obvious to one of ordinary skill in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for independent claim 21 and claim 22, which depends therefrom, and the Examiner should withdraw the rejection of claims 21 and 22 under 35 U.S.C. § 103(a).

CONCLUSION

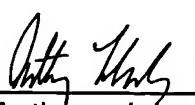
In view of the foregoing, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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